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10/608,064	06/30/2003	Akira Jinzaki	826.1878	7805

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EXAMINER	
HOANG, HIEU T	
ART UNIT	**PAPER NUMBER**
2452	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/608,064	JINZAKI, AKIRA	
	Examiner	Art Unit	
	HIEU T. HOANG	2452	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 6-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 6-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the amendment filed on 10/27/2008.

2. Claims 1, 6-18 are pending.

Response to Amendment

3. The 35 U.S.C. 101 rejection has been withdrawn due to the amendment.

Response to Arguments

4. Applicant's arguments have been fully considered but are moot in view of new ground(s) of rejection.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1, 6-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The examiner cannot find any disclosure in the specification regarding “a receiving device”, “an extracting device”, “a storage unit”, “a storage control device”, “a relay device”, “a copy device,” and "a transfer device".

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1, 6-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Consider claim 1, the claim recites: “distributing **data** in a network” in the preamble, then “receiving, as **data** received from a sender, segments of broadcast type communication **data**”, then later on recites “the data.” It is not clear what applicant refers to using “the data.” Claim 1 recites “**the** addressed receiver” on line 22. How is the addressed receiver recognized by the system?

9. Claims 1, 6-18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: structural relationships between the claimed elements such as the devices, the storage unit, etc. Claim 1 recites "a storage unit" by itself on line 12. What is the function of the storage unit in relation with other units? The examiner sees no relationship between the claimed “storage unit” and “broadcast type communication control table storage unit” and “storage control device” on lines 12-16.

10. Applicant is requested to check and fix similar 35 U.S.C. 112 errors in the remaining claims.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1, 6-8 11-17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 2002/0194367, hereafter Nakamura), in view of Nakano et al. (US 6,337,850, hereafter Nakano), Pellacuru (US 7,344,125), and what was known in the art (Official Notice or ON).

13. For claim 1, Nakamura discloses a broadcast type communication data distribution apparatus distributing data in a network, comprising:

a broadcast type communication data recognition unit (fig. 16, multicast substitute device 45, [0075]) comprising:

- a receiving device receiving, as data received from a sender, segments of broadcast type communication data sent through the network as a unicast communication (fig. 16, unicast broadcast data is routed to a multicast substitute device, non-broadcast data is routed to a network terminating device, [0074] lines 10-15, a user broadcasts data using unicast connections to a plurality of host devices, broadcast segments to a plurality of host devices is intercepted at the multicast substitute device);

- a broadcast type communication control table storage unit including a storage control device storing an address of a receiver for which the data should be copied and transferred ([0076], a table for conversion, storing addresses of receivers to which data is to be transferred),
- a copy/transfer unit comprising a relay device relaying the data to an addressed receiver, a transfer device transferring the copied data to one or more receivers other than the addressed receiver or another distribution device through the network (fig. 16, data is then sent to a plurality of receivers through connections 24, 25, and 26, data is relayed to a plurality of receivers using multicast)

Nakamura does not explicitly disclose wherein a source address field of the data stores a source address, an identifier and control information; and an extracting device extracting from the source address of the data, the identifier and the control information including a command, by analyzing a source address field of the data.

However, Nakano discloses a field including a source address, a stream identifier and control information that can be extracted by analyzing the field (fig. 37, 38, items 3712 and 3721 and 3722, combination of source address, command and stream ID is read as source address field where stream ID and command are stored)

It would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Nakamura and Nakano implement a field including a source address, an ID of content and a command to integrate commands in a data packet to control content distribution or multicasting efficiently instead of using separate packets for control and data.

Nakamura-Nakano does not disclose the control information includes information specifying a relay and copy and transfer of the data received from the sender.

However, Pellacuru discloses sending a control message from a sender to a multicast control device to modify (or for specifying a relay and copy and transfer multicast data) a list of multicast receivers (col. 13 line 54-col. 14 line 5).

It would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Nakamura-Nakano and Pellacuru to send control information as described by Pellacuru to a multicast control unit to specify a relay and copy/transfer of the data to a list of receivers so that only authorized receivers can receive the content (Pellacuru, col. 13 line 54-col. 14 line 5).

Nakamura-Nakano-Pellacuru does not explicitly disclose a data transfer available/unavailable flag addressed to the receiver in relation to the identifier of the data in the storage unit, and a copy device copying the data is based on the data transfer available/unavailable flag stored in the storage unit.

However, Official notice is taken that using a flag to indicate whether data transfer is available or unavailable is known in the art (e.g., US 5,948,089, Wingard, fig. 6, col. 15 lines 1-16, flag 7 indicates whether which data is available in relation to the data); and copying data is known in unicast to multicast conversion (e.g., US 7,082,142, Begeja, fig. 1, unicast to multicast convergence, col. 3 lines 52-60, unicast data is received and replicated so that each receiver can receive the stream)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Nakamura-Nakano-Pellacuru and what was

known in the art to implement an advantageous multicast method as described by Nakamura (Nakamura, fig. 16, substituting unicast broadcast data with multicast data); and take advantage of the use a flag to indicate when the desired data is available for e.g. copying which is known in unicast to multicast conversion (Wingard, col. 14 lines 51-58) so that necessary processing only initiates when the data is available to save network and computing resources.

14. Claim 18 is rejected for the same rationale as in claim 1.

15. For claim 6, Nakamura-Nakano-Pellacuru-ON further discloses said broadcast communication control table storage unit, further comprises an address addition device adding a destination address of the data as a receiver address in relation to the identifier of the data received from the sender when said broadcast type communication data recognition unit extracts a command from the control information indicating an addition of a receiver (Pellacuru, col. 13 l. 63-col. 1 l. 5, control message to add a receiver from a multicast receiver list).

16. For claim 7, Nakamura-Nakano-Pellacuru-ON further discloses a first entry deletion device deleting an entry having a receiver address that matches a destination address of the data in relation to the identifier of the data received from the sender when said broadcast type communication data recognition unit extracts a command

from the control information indicating a deletion of a receiver (Pellacuru, col. 13 l. 63-col. 1 l. 5, control message to delete a receiver from a multicast receiver list)

17. For claim 8, Nakamura-Nakano-Pellacuru-ON further discloses a second entry deletion device deleting all entries having the identifier in its entry in relation to the identifier of the data received from the sender when said broadcast type communication data recognition unit extracts a command from the control information indicating a deletion of all receivers of broadcast type communication data corresponding to the identifier of the data (Pellacuru, col. 13 l. 63-col. 1 l. 5, control message to delete multiple receivers from a multicast receiver list).

18. For claim 11, Nakamura-Nakano-Pellacuru-ON further discloses said copy/transfer unit relays or copies/transfers all segments of data received from the sender, including the control information extracted by the broadcast type communication data recognition unit (Nakamura, [0076]).

19. For claim 12 and 13, Official notice is taken that scrambling information is a well-known technique in the art of Network Security (see e.g., Kwon et al., US 2002/0138721, abstract).

Therefore, it would have been obvious for one skilled in the art at the time of the invention to scramble information before sending it out to a destination so that the

scrambled information can then be unscrambled to be used at the destination in order to provide extra security for network transactions.

20. For claim 14, Nakamura-Nakano-Pellacuru-ON further discloses the data received from the sender includes no data to be finally provided for a receiver (same rationale as in claim 12 and 13, because the data has been scrambled, there is no data to be finally provided for a receiver)

21. For claim 15, Nakamura-Nakano-Pellacuru-ON further discloses said broadcast type communication data recognition unit analyzes a source address, which is a private address of a MAC address in an Ethernet, and recognizes data in a layer 2 network (Nakamura, fig. 4, layer 2 MAC address, MAC is a standard OSI layer 2 or data-link layer).

22. For claim 16, Nakamura-Nakano-Pellacuru-ON further discloses said broadcast type communication data recognition unit analyzes a source address, which is an Internet protocol address, and recognizes data in a layer 3 network (Nakamura, fig. 3, layer 3 IP address, IP is an OSI layer 3 or network layer).

23. For claim 17, Nakamura-Nakano-Pellacuru-ON further discloses said broadcast type communication data recognition unit analyzes a source address, which is a port

number of a user data protocol or a transmission control protocol, and recognizes data in a layer 4 network (TCP is a standard OSI layer 4 or transport layer).

24. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura-Nakano-Pellacuru-ON, as applied to claim 1, further in view of Tzeng et al. (US 2003/0212814, hereafter Tzeng).

25. For claim 9, Nakamura-Nakano-Pellacuru-ON further discloses a flag setting device setting the data transfer available/unavailable flag of a receiver address that matches the destination address of the data received from the sender to unavailable when said broadcast type communication data recognition unit extracts a command from the control information indicating unavailability of data distribution to a receiver (same rationale as in claims 7-8). Nakamura-Nakano-Pellacuru-ON does not disclose the information is indicating the stoppage of data distribution to a receiver.

However, Tzeng discloses that the information is indicating the stoppage of data distribution to a receiver ([0032], a pause frame pauses transmission)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Nakamura-Nakano-Pellacuru-ON and Tzeng in order to stop, resume transferring content to the receiver to provide content administrative control to a receiver and also avoid congestion in the network (Tzeng, [0005])

26. For claim 10, Nakamura-Nakano-Pellacuru-ON further discloses a flag setting device setting the data transfer available/unavailable flag of a receiver address that matches the destination address of the data received from the sender to unavailable when said broadcast type communication data recognition unit extracts a command from the control information indicating availability of data distribution to a receiver (same rationale as in claims 7-8). Nakamura-Nakano-Pellacuru-ON does not disclose the information is indicating a restart of data distribution to a receiver.

However, Tzeng discloses that the information is indicating the re-start of data distribution to a receiver ([0030], an unpause frame resumes the transmission)

Therefore, it would have been obvious for one skilled in the art at the time of the invention to combine the teachings of Nakamura-Nakano-Pellacuru-ON and Tzeng in order to stop, resume transferring content to the receiver to provide content administrative control to a receiver and also avoid congestion in the network (Tzeng, [0005])

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is disclosed in form PTO 892.

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu T. Hoang whose telephone number is 571-270-1253. The examiner can normally be reached on Monday-Thursday, 8 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HH

/Kenny S Lin/
Primary Examiner, Art Unit 2452